

39. (New) The catalyst of Claim 38 wherein the catalyst-precursor-to-alumoxane molar ratio is from about 1:500 to 10:1.
40. (New) The catalyst system of Claim 17 wherein the metal of the metal cation is Ni.
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REMARKS

Thank you for allowing me the interview on March 12, 2001. I appreciate the time you took to progress our case towards issuance. Please reconsider the outstanding rejections on the basis of the above amendments and the remarks set out below. The remarks are labeled to correspond to the numbered paragraphs of the Office Action.

Paragraphs 2 and 3 of the Office Action

I have reinserted "covalently" at page 3 line 10 of the specification and in the claims in order to progress the patent towards issuance. While on a theoretical level the Office Action treats the removal of "covalently", I believe that the disclosure when taken as a whole manifestly communicates to one of ordinary skill in the art a much more practical scope. First and foremost the disclosure states that the bonding is covalent, which fully encompasses "dative bonding". (See below) Furthermore, any type of van der Waals or ionic interaction between Ni and N in a molecular arrangement such as described in the present application, if they exist at all, would be exceptional. I note that the International Union of Pure and Applied Chemistry defines "covalent" as: a region of relatively high electron density between nuclei which arises at least partly from sharing of electrons and gives rise to an attractive force and characteristic internuclear distance. It defines "coordination" as: the formation of a covalent bond, the two shared electrons of which have come from only one of the two parts of the molecular entity linked by it. (See Appendix C for photocopies of the relevant dictionary pages.)

Since I am returning the relevant portions of the specification to the forms they had at filing, no new matter is being added. Paragraphs 2 and 3 of the Office Action are thus addressed.

Paragraphs 4

The portion of these paragraphs dealing with the patent-scope ramifications of preamble limitations are discussed with the Sommazzi art rejection below.

I have adopted your suggestion in part by replacing "stabilized by" with "connected to". Thus, the pertinent claims are distinct.

I recognize your point on the lack of clarity of the "oxidation state of MX_r is satisfied." Clarifying this point necessitated a large amount of the restructuring that is now present in the claims. Ultimately, Claim 17 did not properly depend from Claim 1. Claim 1 was directed to a catalyst system while Claim 17 was directed to a structural modification of the catalyst system. This has been corrected. Claim 1 and other parallel claims are now directed to a catalyst precursor. And Claim 17 is directed to a catalyst system comprising that precursor.

The proper interpretation of univalent anionic ligand is the interpretation that one of ordinary skill in the art would give it. This certainly includes all the specific examples given in the specification and claims. And it certainly includes all other univalent anions that those of ordinary skill in the art would recognize as having analogous function in analogous catalysts.

Paragraphs 5–6

The Office Action rejects Claims 1 and 13 and those that depend from them under 35 USC § 102(b) as being anticipated by Sommazzi, U.S. Pat. No. 5,314,856.

As pointed out in our interview, Sommazzi takes a different route to whatever his catalyst is than the route we take to ours. (See Sommazzi Column 5, lines 13–29). The addition of a fairly strong organic acid or a mineral acid severely changes the resulting coordination equilibria that these coordination complexes rely on for their formation. Alternatively, the acid changes the nature of the support surface. When this additional preparative step is considered, it is no longer scientifically expected that a compound such as we claim would be formed.

This preparative difference bears on the 102(b) rejection in a fundamental way. It prevents Sommazzi from being a proper 102(b) reference—there is no one-to-one correspondence between the elements of Sommazzi and our elements.

This leaves Sommazzi at best as an obviousness-type rejection. The Office Action does not show why it would be obvious to one of ordinary skill in the art to go from Sommazzi's alternating carbon monoxide/olefin copolymers to our polyolefins by leaving out an acid addition step. Since it is unclear why Sommazzi employs this step, a 103 rejection would have to be supported with other art or some other citation illustrating why the acid was used and how that would motivate us to modify Sommazzi's procedure as we aimed at our polymers.

The 102(b) rejection has been traversed. We have not yet been presented with a prima facie obviousness case. Please withdraw the rejection based on Sommazzi. Moreover, since the anticipatory effect of Sommazzi has been extinguished, the relative weight to be given to preamble limitations is moot in this case.

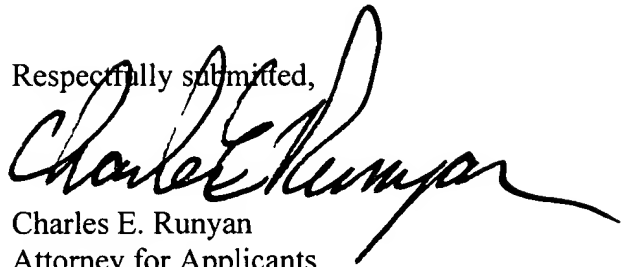
Paragraph 7

The Office Action rejects Claims 1 and 13 and those claims that depend from Claims 1 and 13 over Brookhart, U.S. Pat. No. 5,866,663. Please reconsider this rejection.

In addition to our discussion of Brookhart during the interview, please note the discussion of Brookhart's catalysts in our specification. Especially note the discussion of unexpected results of our catalysts versus Brookhart's. (Starting at page 21 of the specification.)

The claims are now in a condition for allowance. Please take the necessary action towards that end.

Respectfully submitted,



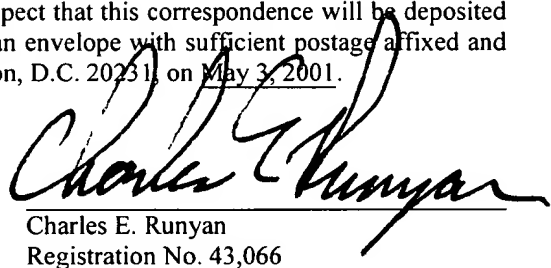
Charles E. Runyan
Attorney for Applicants
Registration No. 43,066

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Date

ExxonMobil Chemical Company
Law Technology
P.O. Box 2149
Baytown, Texas 77522-2149
(281) 834-2657

CERTIFICATE UNDER 37 CFR 1.8(a)

I hereby certify that I have a reasonable basis to expect that this correspondence will be deposited with the United States Postal Service as first class mail in an envelope with sufficient postage affixed and addressed to Assistant Commissioner for Patents, Washington, D.C. 20231, on May 3, 2001.



Charles E. Runyan
Registration No. 43,066